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## LACTATION RECORDS RECEIVED BY USDA<sup>1/</sup>

In 1970, 1,907,042 Official DHI lactation records were reported to USDA for use in genetic evaluations of bulls and cows and in research work. This is 36,766 more than were reported in 1969. The number of records reported in 1969 and in 1970 for each State are given in table 1. They include those records reported for the USDA-DHIA Sire Summary runs of May 1969, September 1969, and January 1970, for calendar year 1969, and records reported for the runs of May 1970, September 1970, and January 1971 for calendar year 1970.

### SUMMARY OF LACTATION RECORDS REPORTED

A summary of the numbers of lactation records reported since 1957 is given in table 2. The number reported annually has increased from approximately half a million in 1957 to almost 2 million in 1970. The percentage of Official DHI cows represented has increased from 38 percent in 1957 to 90 percent in 1970, when 2,122,011 cows were enrolled.

The percentage of cows for which data are on computer processing started in 1960, the first year for computer processing of these records by USDA.

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<sup>1/</sup> Prepared by G. J. King, B. T. McDaniel, and F. N. Dickinson, with the technical assistance of C. A. Rampendahl, J. J. Corbin, and A. H. Kienast.

# RECORDS REPORTED BUT NOT USED IN GENETIC EVALUATIONS

In 1970, of the 1,907,042 lactation records submitted to USDA, the following numbers of records were not used for genetic evaluations of bulls and cows:

<u>Edit and reason for rejection</u>	<u>Number</u>	<u>Percent of re- cords submitted</u>
Preliminary edit- Identification number all zeros for sires of grade cows-----	780,897	40.95
Preliminary edit- Other invalid data items---	13,018	0.68
Main edit- Conflicts with another record-----	<u>55,591</u>	<u>2.92</u>
Total-----	849,506	44.55

For the May 1971 run alone, 584,159 lactation records were submitted. Of these, the following numbers were not used:

<u>Edit and reason for rejection</u>	<u>Number</u>	<u>Percent of re- cords submitted</u>
Preliminary edit- Identification number all zeros for sires of grade cows-----	240,989	41.25
Preliminary edit- Other invalid data items---	6,045	1.03
Main edit- Conflicts with another record-----	<u>20,327</u>	<u>3.48</u>
Total-----	267,361	45.76

The types and frequencies of error or reject conditions noted in 1970 editing are shown in table 3. Missing identification numbers for sires of grade cows caused the most records to be rejected (780,897); next in order was conflicting or questionable birth dates--appearing 18,414 times--1,226 more than in 1969. The number of records for registered cows rejected because dam or sire number was all zeros was 3,821--265 less than in 1969.

The inclusion of blanks in the record and alphabetics in the two high-order positions of the sire number decreased greatly in 1970 after a sharp rise in 1969.

Table 4 gives the frequency of the various error conditions encountered in the May 1971 sire-summary run.

You will note that tables 3 and 4 show error conditions rather than the number of records in error. As many as four error conditions may be coded for a single record. This is reflected in the fact that the number of error conditions in tables 3 and 4 is more than the number of records shown on page 3 as not used for bull and cow evaluation.

The records rejected in the main edit are returned to the appropriate processing center for correction.

Increased care in identifying and reporting all animals in each herd would greatly increase the number of records used for bull and cow evaluation.

#### SIRE IDENTIFICATION IN OFFICIAL DHI LACTATION RECORDS BY STATE, 1968-1970

Table 5 shows valid vs. missing or invalid sire identification (ID) by State for 1968 through 1970. Some States' year-to-year comparisons may not be appropriate because of large fluctuations in the number of records reported from year to year.

In 1970, missing sire identification continues to be the main reason that Official DHI records are not useful in



sire and cow evaluation.

## SIRE IDENTIFICATION IMPORTANT FOR DAIRY HERD MANAGEMENT

Accurate identification of sires of cows in a herd is valuable for herd management and improvement. For instance, accurate sire identification is necessary in most herds to avoid the harmful effects of high levels of inbreeding.

When the identification of sires is missing, they cannot be evaluated. The summaries that are made are affected by the omission of records for daughters without sire ID. This is a disadvantage to the whole dairy industry, particularly since dairymen might be missing better bulls that have not been identified. The lack of sire ID may also slow down genetic improvement in the nation's dairy herd and cause economic loss to the industry.

## SUMMARY OF THE USE OF OFFICIAL DHI RECORDS FOR BULL AND COW EVALUATION

Table 6 shows the trend between 1964 and 1970 in percentage of Official DHI lactations reported to USDA with missing sire identification, losses due to other errors found in editing, and the number of records used. There has been some increase in the proportion of cows without sire identification, which is not desirable. However, there has been a net increase in the number of records that contain valid sire identification and are usable in genetic evaluations.

## PERCENT OF COWS WITH SIRE IDENTIFICATION

Table 7 shows the variation in percentage of Official DHI cows with sire identification, among selected States, in 1968 through 1970. It shows that in 1970, only 9 States provided sire ID for 70 percent or more of their cows; 38 States provided sire ID for from 40 through 69 percent of their cows; and one State provided sire ID for less than 10 percent of its cows. These data show about the same percentage of records with valid sire ID being reported in 1968, 1969, and 1970 and suggest that differing emphasis on sire identification is practiced among the States.



TABLE 1.--Lactation records received by USDA in 1969 and 1970 for bull and cow evaluation<sup>1/</sup>

State	Official DHI cows on test 1-1-70	1970 lactation records		Official DHI cows on test 1-1-69	1969 lactation records	
		Total	Proportion of cows enrolled in Official DHI		Total	Proportion of cows enrolled in Official DHI
	No.	No.	% 2/	No.	No.	% 2/
Alabama-----	33,078	34,602	104.6	32,277	33,630	104.2
Alaska-----	193	230	119.2	232	193	83.2
Arizona-----	13,785	11,917	86.4	20,574	7,801	37.9
Arkansas-----	5,411	6,159	113.8	5,098	4,616	90.5
California-----	324,563	114,095	35.2	363,627	113,122	31.1
Colorado-----	18,171	15,935	87.7	18,496	14,106	76.3
Connecticut-----	23,699	24,256	102.4	23,560	23,708	100.6
Delaware-----	4,913	4,634	94.3	4,661	5,058	108.5
Florida-----	22,235	23,881	107.4	20,584	21,745	105.6
Georgia-----	33,770	37,829	112.0	31,507	32,409	102.9
Hawaii-----	4,174	2,701	64.7	3,032	2,531	83.5
Idaho-----	24,902	27,686	111.2	25,786	28,243	109.5
Illinois-----	56,407	57,482	101.9	57,483	85,234	148.3
Indiana-----	47,681	31,285	65.6	39,409	39,493	100.2
Iowa-----	61,536	65,603	106.6	62,113	61,030	98.3
Kansas-----	40,266	41,367	102.7	39,640	39,456	99.5
Kentucky-----	25,230	27,800	110.2	23,733	25,086	105.7
Louisiana-----	10,789	12,192	113.0	10,549	9,877	93.6
Maine-----	18,533	19,346	104.4	17,905	19,344	108.0
Maryland-----	42,196	39,937	94.6	41,040	34,400	83.8
Massachusetts----	19,248	19,884	103.3	20,032	20,261	101.1
Michigan-----	79,676	88,893	111.6	79,632	72,691	91.3
Minnesota-----	119,456	117,355	98.2	123,790	112,325	90.7
Mississippi-----	22,898	24,812	108.4	22,907	23,592	103.0
Missouri-----	31,366	32,017	102.1	29,323	28,155	96.0
Montana-----	5,228	2,537	48.5	5,090	2,137	42.0
Nebraska-----	20,000	20,922	104.6	19,338	18,755	97.0
Nevada-----	3,743	1,927	51.5	4,748	1,938	40.8
New Hampshire----	10,619	11,386	107.2	10,313	12,014	116.5
New Jersey-----	22,167	22,569	101.8	22,488	24,183	107.5
New Mexico-----	11,641	8,524	73.2	6,790	8,789	129.4
New York-----	193,257	196,896	101.9	188,007	198,395	105.5
North Carolina---	54,146	60,877	112.4	50,377	55,220	109.6
North Dakota-----	6,013	5,616	93.4	6,271	6,111	97.4
Ohio-----	88,516	65,660	74.2	88,729	85,456	96.3
Oklahoma-----	22,526	21,339	94.7	19,188	18,094	94.3
Oregon-----	25,255	27,958	110.7	26,600	28,247	106.2
Pennsylvania-----	150,493	138,948	92.3	157,838	144,516	91.6
Rhode Island-----	1,852	1,629	88.0	1,908	1,884	98.7
South Carolina---	28,842	31,076	107.7	29,261	29,379	100.4
South Dakota-----	5,600	7,001	125.0	6,914	6,913	100.0
Tennessee-----	31,363	35,351	112.7	30,840	32,790	106.3
Texas-----	30,564	32,763	107.2	33,402	32,433	97.1
Utah-----	21,130	19,903	94.2	22,318	18,883	84.6
Vermont-----	38,147	40,112	105.2	38,335	40,676	106.1
Virginia-----	64,272	72,616	113.0	63,789	67,979	106.6
Washington-----	49,423	53,931	109.1	42,714	53,106	124.3
West Virginia----	10,215	10,367	101.5	9,661	9,843	101.9
Wisconsin-----	140,258	134,756	96.1	134,594	114,203	84.8
Wyoming-----	1,558	480	30.8	1,443	226	15.7
United States----	3/2,121,004	1,907,042	89.9	3/2,137,946	1,870,276	87.5

<sup>1/</sup> Lactation record input for USDA-DHIA Sire Summary runs for May 1969, September 1969, and January 1970 for calendar year 1969 and for May 1970, September 1970, and January 1971 for calendar year 1970.

<sup>2/</sup> Percentages vary by State and may exceed 100 percent depending on reporting and processing procedures in December and January of each year and year-to-year changes in reporting procedures.

<sup>3/</sup> Puerto Rico not included.

TABLE 2.--Summary of lactation records received by USDA

Year	Official DHI cows enrolled on January 1 of each year	Lactation records reported to USDA	Official DHI cows repre- sented by re- cords reported	Cows for which data are on computer pro- cessing <u>1/</u>
	<u>No.</u>	<u>No.</u>	<u>%</u>	<u>%</u>
1957---	1,479,799	565,360	38	--
1958---	1,548,884	786,496	51	--
1959---	1,607,538	927,998	58	--
1960---	1,746,752	886,495	51	31
1961---	1,867,469	1,084,799	58	41
1962---	1,958,355	1,211,407	62	44
1963---	2,006,534	1,320,423	66	51
1964---	2,010,144	1,437,959	72	65
1965---	2,087,581	1,749,752	84	75
1966---	2,058,592	1,788,974	87	83
1967---	2,098,919	1,851,274	88	85
1968---	2,131,929	1,916,831	90	85
1969---	2,138,953	1,870,276	87	87
1970---	2,122,011	1,907,042	90	91

1/ Percentage of all Official DHI cows that were reported as on test and for which data are being processed through regional computing centers. USDA reported computer processing of DHIA records first in 1960.

TABLE 3 .--Relative frequency of error conditions in Official DHI lactation records submitted for edit in 1970<sup>1/</sup>

Main edit rejects <sup>2/3/</sup>	Preliminary edit -by registered and grade cows	Error conditions	Error conditions in category	Percentage of total error conditions	Percentage of all records submitted
Code			No.	%	%
B	Grade-----	Sire number all zeros-----	780,897	90.71	40.95
A	-----	Conflict or questionable birth date-----	18,414	2.14	0.97
F	-----	Conflict with previous information supplied-----	15,265	1.77	.80
S	-----	Conflict or questionable calving date-----	10,618	1.23	.56
D	-----	Conflict or questionable sire number-----	5,011	0.58	.26
	-----	Conflict or questionable dam number-----	3,885	.45	.20
C	Registered-----	Cow number all zeros-----	3,239	.38	.17
	-----	Conflict or questionable cow number-----	3,125	.36	.16
	Registered-----	Dam number all zeros-----	2,226	.26	.12
	Regist./Grade-----	Sire breed zero 4/-----	2,189	.25	.11
	Registered-----	Cow and dam breed unequal-----	1,807	.21	.09
	Regist./Grade-----	Blanks in any position of record-----	1,660	.19	.09
	Registered-----	Sire number all zeros-----	1,595	.19	.08
	Registered-----	Cow and sire breed unequal-----	1,579	.18	.08
	Regist./Grade-----	Alpha in high-order 2 positions of sire number-----	1,264	.15	.07
	Regist./Grade-----	Alpha in high-order 2 positions of dam number-----	1,251	.15	.07
	Registered-----	Cow breed "eight"-----	1,127	.13	.06
J	Regist./Grade-----	Dam breed zero 4/-----	946	.11	.05
	-----	Equal identification number for two or more of the animals in the pedigree.	731	.08	.04
	Grade-----	Eartag cow breed "non-eight," sire breed unequal-----	615	.07	.03
	Registered-----	Dam number alphabetic-----	508	.06	.03
	Regist./Grade-----	Alpha in high-order 2 positions of cow number-----	481	.06	.03
	Registered-----	Sire number alphabetic-----	453	.05	.02
I	-----	Invalid characters-usually blanks or alphabetics-----	387	.04	.02
	Registered-----	Cow number alphabetic-----	358	.04	.02
	Grade-----	Eartag cow breed "eight," "non-eight" sire and dam equal-----	271	.03	.01
	Registered-----	Cow breed zero 4/-----	165	.02	.01
M	-----	Conflict or questionable milk pounds-----	157	.02	.01
O	-----	Conflict or questionable fat pounds-----	142	.02	.01
G	-----	Invalid State code-----	128	.01	.01
	Regist./Grade-----	Days in milk zero-----	122	.01	.01
E	-----	Conflict or questionable breed code-----	96	.01	.01
	Registered-----	Sire number an eartag number-----	70	.01	.004
P	-----	Conflict or questionable fat percent-----	52	.01	.003
N	-----	Conflict or questionable days in milk-----	27	.003	.001
	Regist./Grade-----	Alpha "j" through "z" in "Termination" code-----	9	.001	.0005
	Regist./Grade-----	Blank days in milk-----	5	.001	.0003
	Registered-----	Blank cow breed-----	2	.0002	.0001
Total error conditions-----			860,877	100.00	45.14

1/ Total lactation records submitted = 1,907,042; total lactation records rejected = 849,506; percentage lost = 44.5.

2/ Conditions using these codes were discovered in the main edit and were recorded on the error tapes returned to the processing centers. All others were discovered in the preliminary edit.

3/ Detailed explanations of the main edit reject codes are in the December 1970 Dairy-Herd-Improvement Letter, ARS 44-222, (Vol. 46, No. 6).

4/ But a non-zero ID number.

TABLE 4.--Relative frequency of error conditions in Official DHI lactation records submitted for edit in May 1971<sup>1/</sup>

Main edit rejects <sup>2/3/</sup>	Preliminary edit by registered and grade cows	Error conditions	Error conditions in category	Percentage of total error condi- tions	Percentage of all records submitted
Code			No.	%	%
D-----	Grade-----	Sire number all zeros-----	240,989	88.76	41.25
A-----		Conflicting or questionable dam number-----	4,844	1.78	0.83
B-----		Conflict with previous information supplied-----	4,454	1.64	.76
S-----		Conflicting or questionable birth date-----	3,797	1.40	.65
		Conflicting or questionable sire number-----	3,158	1.16	.53
F-----	Registered-----	Cow number all zeros-----	3,084	1.14	.53
I-----		Conflicting or questionable calving date-----	2,742	1.01	.47
C-----		Invalid characters--usually blanks or alphabetics-----	2,437	0.90	.42
		Conflicting or questionable cow number-----	863	.32	.15
	Registered-----	Dam number all zeros-----	708	.26	.12
	Regist./Grade-----	Sire breed zero <u>4/</u> -----	693	.26	.12
	Registered-----	Cow breed "eight" <sup>4/</sup> -----	634	.23	.11
	Registered-----	Sire number all zeros-----	509	.19	.09
	Registered-----	Cow and dam breed unequal-----	416	.15	.07
	Registered-----	Cow and sire breed unequal-----	374	.14	.06
	Regist./Grade-----	Blanks in any position of record-----	355	.13	.06
	Regist./Grade-----	Dam breed zero <u>4/</u> -----	236	.09	.04
J-----		Equal identification number for two or more of the animals in the pedigree.	221	.08	.04
	Grade-----	Eartag cow breed "non-eight," sire breed unequal-----	181	.07	.03
	Registered-----	Dam number alphabetic-----	158	.06	.03
	Registered-----	Sire number alphabetic-----	132	.05	.02
	Registered-----	Cow number alphabetic-----	87	.03	.01
M-----		Conflicting or questionable milk pounds-----	68	.03	.01
O-----		Conflicting or questionable fat pounds-----	61	.02	.01
	Registered-----	Cow breed zero <u>4/</u> -----	54	.02	.01
P-----	Grade-----	Eartag cow breed "eight," "non-eight" sire and dam equal	47	.02	.01
G-----		Conflicting or questionable fat percent-----	40	.01	.01
	Regist./Grade-----	Invalid State code-----	35	.01	.01
	Registered-----	Alpha in high-order 2 positions of cow number-----	27	.01	.005
E-----		Sire number an eartag number-----	22	.01	.004
	Regist./Grade-----	Conflicting or questionable breed code-----	19	.01	.003
	Regist./Grade-----	Alpha in high-order 2 positions of sire number-----	19	.01	.003
	Registered-----	Alpha in high-order 2 positions of dam number-----	17	.01	.003
	Regist./Grade-----	Blank cow breed-----	10	.004	.002
	Registered-----	Days in milk zero-----	7	.003	.001
N-----		Conflicting or questionable days in milk-----	6	.002	.001
Total error conditions-----			271,504	100.00	46.48

<sup>1/</sup> Total lactation records submitted = 584,159; total lactation records rejected = 267,361; percentage lost = 45.8.

<sup>2/</sup> Conditions using these codes were discovered in the main edit and were recorded on the error tapes returned to the processing centers. All others were discovered in the preliminary edit.

<sup>3/</sup> Detailed explanations of the main edit reject codes are in the December 1970 Dairy-Herd-Improvement Letter, ARS 44-222, (Vol. 46, No. 6).

<sup>4/</sup> But a non-zero ID number.



TABLE 5.--Comparison of sire identification in Official DHI lactation records for 1968, 1969, and 1970

State	Official DHI records with valid sire identification						Official DHI records without valid sire identification					
	Number reported in--			Percent of all records reported in--			Number reported in--			Percent of all records reported in--		
	1968	1969	1970	1968	1969	1970	1968	1969	1970	1968	1969	1970
	Thou.	Thou.	Thou.	%	%	%	Thou.	Thou.	Thou.	%	%	%
Ala-----	9.0	12.2	11.8	31.5	36.4	34.0	19.6	21.4	22.8	68.5	63.6	66.0
Alaska----	0.1	0.1	0.1	72.8	67.9	61.3	0.05	0.1	0.1	27.2	32.1	38.7
Ariz-----	8.5	4.8	7.3	67.7	61.2	60.9	4.1	3.0	4.7	32.3	38.8	39.1
Ark-----	2.3	2.8	4.0	59.9	61.7	64.8	1.5	1.8	2.2	40.1	38.3	35.2
Calif-----	78.5	50.7	52.3	54.1	44.8	45.9	66.6	62.4	61.8	45.9	55.2	54.1
Colo-----	8.5	5.9	7.2	53.2	42.1	45.3	7.5	8.2	8.7	46.8	57.9	54.7
Conn-----	20.0	16.6	17.0	70.2	70.0	70.3	8.5	7.1	7.2	29.8	30.0	29.7
Del-----	3.2	3.1	2.6	62.2	61.4	56.7	2.0	2.0	2.0	37.8	38.6	43.3
Fla-----	10.5	13.5	14.2	55.8	62.3	59.6	8.3	8.2	9.6	44.2	37.7	40.4
Ga-----	13.0	13.8	18.0	39.1	42.7	47.5	20.2	18.6	19.9	60.9	57.3	52.5
Hawaii-----	.1	.02	.1	3.3	.8	2.4	3.8	2.5	2.6	96.7	99.2	97.6
Idaho-----	9.2	10.2	9.6	38.1	36.2	34.7	14.9	18.0	18.1	61.9	63.8	65.3
Ill-----	34.1	65.5	37.9	64.7	76.8	65.9	18.6	19.8	19.6	35.3	23.2	34.1
Ind-----	17.2	16.0	15.0	51.9	40.4	47.8	15.9	23.5	16.3	48.1	59.6	52.2
Iowa-----	31.6	33.4	37.0	53.0	54.7	56.4	28.1	27.6	28.6	47.0	45.3	43.6
Kans-----	22.7	25.3	26.5	61.9	64.2	64.1	14.0	14.1	14.9	38.1	35.8	35.9
Ky-----	11.1	13.3	14.3	51.6	53.0	51.3	10.4	11.8	13.5	48.4	47.0	48.7
La-----	4.3	6.5	7.8	61.6	65.9	64.3	2.7	3.4	4.3	38.4	34.1	35.7
Maine-----	16.3	14.2	14.4	70.6	73.3	74.7	6.8	5.2	4.9	29.4	26.7	25.3
Md-----	22.7	15.2	26.9	59.2	44.2	67.4	15.6	19.2	13.0	40.8	55.8	32.6
Mass-----	19.3	15.5	15.3	75.2	76.6	77.1	6.4	4.7	4.6	24.8	23.4	22.9
Mich-----	53.6	29.3	50.5	58.1	40.3	56.8	38.6	43.4	38.4	41.9	59.7	43.2
Minn-----	59.8	60.1	63.8	50.7	53.5	54.4	58.2	52.2	53.5	49.3	46.5	45.6
Miss-----	7.1	11.2	12.2	38.9	47.6	49.3	11.2	12.4	12.6	61.1	52.4	50.7
Mo-----	12.1	13.8	16.2	49.4	49.2	50.5	12.4	14.3	15.8	50.6	50.8	49.5
Mont-----	3.7	1.9	2.2	83.0	88.1	87.6	.8	.3	.3	17.0	11.9	12.4
Nebr-----	7.2	8.3	10.0	42.8	44.3	47.8	9.6	10.4	10.9	57.2	55.7	52.2
Nev-----	1.7	1.0	1.3	51.3	52.7	64.9	1.6	.9	.7	48.7	47.3	35.1
N. H-----	11.2	9.0	8.7	72.4	74.9	76.8	4.3	3.0	2.6	27.6	25.1	23.2
N. J-----	20.5	16.4	15.4	65.9	68.0	68.1	10.6	7.7	7.2	34.1	32.0	31.9
N. Mex-----	8.6	6.5	6.6	72.9	74.4	77.5	3.2	2.2	1.9	27.1	25.6	22.5
N. Y-----	155.8	133.3	136.0	67.5	67.2	69.1	74.9	65.1	60.9	32.5	32.8	30.9
N. C-----	25.2	31.6	34.5	53.4	57.2	56.7	22.0	23.6	26.3	46.6	42.8	43.3
N. Dak-----	2.7	3.5	3.4	53.4	57.3	60.2	2.3	2.6	2.2	46.6	42.7	39.8
Ohio-----	41.5	43.8	40.0	61.4	51.2	61.0	26.1	41.7	25.6	38.6	48.8	39.0
Okla-----	6.7	7.8	9.0	43.7	43.1	42.3	8.7	10.3	12.3	56.3	56.9	57.7
Oreg-----	11.7	13.6	13.6	49.3	48.0	48.5	12.1	14.7	14.4	50.7	52.0	51.5
Pa-----	170.9	114.8	112.3	77.3	79.4	80.8	50.3	29.8	26.7	22.7	20.6	19.2
R. I-----	1.8	1.4	1.3	71.5	74.2	78.1	.7	.5	.4	28.5	25.8	21.9
S. C-----	11.2	14.7	15.7	47.6	50.1	50.4	12.4	14.6	15.4	52.4	49.9	49.6
S. Dak-----	3.6	4.4	4.4	60.4	63.7	63.2	2.4	2.5	2.6	39.6	36.3	36.8
Tenn-----	12.8	14.6	15.7	44.2	44.5	44.4	16.1	18.2	19.7	55.8	55.5	55.6
Tex-----	12.0	15.3	16.2	41.4	47.2	49.4	17.0	17.1	16.6	58.6	52.8	50.6
Utah-----	17.9	9.1	9.7	48.5	48.0	48.9	19.0	9.8	10.2	51.5	52.0	51.1
Vt-----	27.6	25.3	26.2	58.8	62.3	65.2	19.4	15.4	14.0	41.2	37.7	34.8
Va-----	32.4	39.2	42.3	54.9	57.7	58.2	26.7	28.7	30.3	45.1	42.3	41.8
Wash-----	21.0	24.9	25.5	51.1	46.8	47.3	20.1	28.2	28.4	48.9	53.2	52.7
W. Va-----	6.3	5.6	6.0	59.7	56.7	57.8	4.2	4.3	4.4	40.3	43.3	42.2
Wis-----	84.2	68.6	87.8	61.0	60.1	65.2	53.8	45.6	46.9	39.0	39.9	34.8
Wyo-----	.4	.2	.4	83.6	86.3	89.8	.1	.03	.05	16.4	13.7	10.2

TABLE 6.--Summary of Official DHI records unusable for bull and cow evaluation

Year <sup>1/</sup>	Lactations reported w/out sire identification	Lactations lost by other errors found in editing	Lactation records used	Lactations reported w/out sire identification	Lactation records used
	<u>Thou.</u>	<u>Thou.</u>	<u>Thou.</u>	<u>%</u>	<u>%</u>
1964----	495.3	112.2	830.5	34.4	57.8
1965----	563.9	124.2	1,061.7	32.2	60.7
1966----	665.4	176.0	947.6	37.2	53.0
1968 <sup>2/</sup> --	813.9	79.5	1,023.4	42.5	53.4
1969----	802.1	67.8	1,000.4	42.9	53.5
1970----	780.9	68.6	1,057.5	40.9	55.5

<sup>1/</sup> Data for January 1, 1967, to August 31, 1967 were not available.

<sup>2/</sup> September 1, 1967 through August 31, 1968. January 1 through December 31 for other years.

TABLE 7.--Variation in percentage of Official DHI cows with  
sire identification among States in 1968, 1969  
and 1970

Cows with sire identification	States		
	1968	1969	1970
<u>%</u>	<u>No.</u>	<u>No.</u>	<u>No.</u>
90 or more-----	0	0	0
80-89-----	2	2	3
70-79-----	8	8	6
60-69-----	10	12	15
50-59-----	17	10	11
40-49-----	8	15	12
30-39-----	4	2	2
20-29-----	0	0	0
10-19-----	0	0	0
1- 9-----	1	0	1
Less than 1-----	0	1	0
U.S. average percent ---	59.0	57.1	59.1







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